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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application. Claims 7 and 23 are canceled without prejudice or disclaimer.

Listing of Claims:

1. (Currently Amended) A method of lysing an acid-fast bacterium to extract a gene from the acid-fast bacterium, comprising:

heating the acid-fast bacterium in a liquid containing a non-ionic detergent at a temperature below a boiling point of the liquid,

wherein the non-ionic detergent is selected from polyoxyethyleneglycol p-t-octylphenyl ethers.

2. (Original) The method according to claim 1, wherein the heating temperature is not less than 70°C and less than 100°C.

3. (Previously Presented) The method according to claim 1, wherein the heating is performed for 1 to 30 minutes.

4. (Original) The method according to claim 1, wherein the heating is performed at 96°C for 10 minutes.

5. (Previously Presented) The method according to claim 1, wherein a pH of the liquid is in a range from 7.0 to 12.0.

6. (Previously Presented) The method according to claim 1, wherein a concentration of the non-ionic detergent in the liquid is 0.01 to 10 wt%.

7. (Canceled)

8. (Previously Presented) The method according to claim 1, wherein the liquid further contains a metal chelating agent.

9. (Original) The method according to claim 8, wherein a concentration of the metal chelating agent in the liquid is 0.1 to 100 mM.

10. (Previously Presented) The method according to claim 8, wherein the metal chelating agent is at least one selected from the group consisting of ethylenediaminetetraacetic acid (EDTA), ethylene glycol bis(β-aminoethyl ether)□N,N,N',N'-tetraacetic acid (EGTA), diaminocyclohexane tetraacetic acid, o-phenanthroline, and salicylic acid.

11. (Previously Presented) The method according to claim 1, wherein the acid-fast bacterium to be lysed is at least one selected from the group consisting of *M. avium*, *M. intracellularae*, *M. gordonae*, *M. tuberculosis*, *M. kansasii*, *M. fortuitum*, *M. chelonae*, *M. bovis*, *M. scrofulaceum*, *M. paratuberculosis*, *M. phlei*, *M. marinum*, *M. simiae*, *M. szulgai*, *M. leprae*, *M. xenopi*, *M. ulcerans*, *M. lepraemurium*, *M. flavescens*, *M. terrae*, *M. nonchromogenicum*, *M. malmoense*, *M. asiaticum*, *M. vaccae*, *M. gastri*, *M. triviale*, *M. haemophilum*, *M. africanum*, *M. thermoresistable*, and *M. smegmatis*.

12. (Previously Presented) The method according to claim 1, wherein a biological sample containing the acid-fast bacterium is at least one selected from the group consisting of sputum, spinal fluid, feces, saliva, blood, tissues, and urine.

13. (Previously Presented) A method of amplifying or detecting a gene of an acid-fast bacterium specifically, comprising:

lysing an acid-fast bacterium by the method according to claim 1 to extract a gene of the acid-fast bacterium; and

amplifying or detecting the gene specifically using the extracted gene as a sample.

14. (Withdrawn and Currently Amended) A method of lysing an acid-fast bacterium to extract a gene from the acid-fast bacterium, comprising:

causing lipolysis by treating the acid-fast bacterium with lipase, and

heating the acid-fast bacterium in the presence of a non-ionic detergent,

wherein the non-ionic detergent is selected from polyoxyethyleneglycol p-t-octylphenyl ethers.

15. (Withdrawn) The method according to claim 14, wherein the heating also serves to deactivate the lipase.

16. (Withdrawn) The method according to claim 14, wherein the lipolysis and the heating are performed in a buffer.

17. (Withdrawn) The method according to claim 14, wherein the lipolysis and the heating are performed in a same container as a closed system.

18. (Withdrawn) The method according to claim 14, wherein the heating is performed after the lipolysis.

19. (Withdrawn) The method according to claim 18, wherein the lipolysis is caused at a pH of 4 to 8 and at a temperature of 37°C to 60°C for 5 to 30 minutes, and the heating is performed at a temperature of 37°C to 100°C for 5 to 30 minutes.

20. (Withdrawn) The method according to claim 14, wherein the lipolysis and the heating are performed simultaneously.

21. (Withdrawn) The method according to claim 20, wherein the lipolysis and the heating are performed at a pH of 4 to 8 and at a temperature of 37°C to 60°C for 5 to 30 minutes.

22. (WIthdrawn) The method according to claim 16, wherein a concentration of the lipase in the buffer is 10 to 10000 units/ml.

23. (Canceled)

24. (Withdrawn) The method according to claim 16, wherein a concentration of the non-ionic detergent in the buffer is 0.01 to 10 wt%.

25. (Withdrawn) The method according to claim 14, wherein the heating is performed in the presence of a metal chelating agent in addition to the non-ionic detergent.

26. (Withdrawn) The method according to claim 25, wherein the metal chelating agent is at least one selected from the group consisting of ethylenediaminetetraacetic acid (EDTA), glycol ether diaminetetraacetic acid (EGTA), and 1,2-cyclohexanediaminetetraacetic acid (CyDTA).

27. (Withdrawn) The method according to claim 25, wherein a concentration of the metal chelating agent in the buffer is 0.1 to 2.0 mM.

28. (Withdrawn) The method according to claim 14, wherein the acid-fast bacterium to be lysed is at least one selected from the group consisting of *M. avium*, *M. intracellularae*, *M. gordonae*, *M. tuberculosis*, *M. kansasii*, *M. fortuitum*, *M. chelonae*, *M. bovis*, *M. scrofulaceum*, *M. paratuberculosis*, *M. phlei*, *M. marinum*, *M. simiae*, *M. szulgai*, *M. leprae*, *M. xenopi*, *M. ulcerans*, *M. lepraemurium*, *M. flavescens*, *M. terrae*, *M. nonchromogenicum*, *M. malmoense*, *M. asiaticum*, *M. vaccae*, *M. gastri*, *M. triviale*, *M. haemophilum*, *M. africanum*, *M. thermoresistable*, and *M. smegmatis*.

29. (Withdrawn) The method according to claim 14, wherein a biological sample containing the acid-fast bacterium is at least one selected from the group consisting of

sputum, spinal fluid, feces, saliva, blood, tissues, swab, liquid obtained by gastrolavage, and urine.

30. (Withdrawn) A method of amplifying or detecting specifically a gene of an acid-fast bacterium, comprising:

lysing an acid-fast bacterium by the method according to claim 14 to extract a gene of the acid-fast bacterium; and

amplifying or detecting the gene specifically using the extracted gene as a sample.